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10/576,420	04/19/2006	Shunpei Yamazaki	740756-2955	9417

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WASHINGTON, DC 20004-2128

EXAMINER
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TRAN, TONY

ART UNIT	PAPER NUMBER
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2818

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12/26/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/576,420

Applicant(s)

YAMAZAKI ET AL.

Examiner

Tony Tran

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 13-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 13-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

**REMARKS**

Claims 1-12 were pending in this application, claims 7-12 were canceled without prejudice or disclaimer prior to the office action. By this amendment, claims 1, 2 and 4 are amended and new claims 13-18 are added. No new matter is introduced. Thus, claims 1-6 are 13-18 are now pending.

**Response to Arguments**

1. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this office action:

A person shall be entitled to a patent unless —

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.

Claims 1, 4, and 13-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Arao et al., (Patent No.: US 6639265 B2) (hereinafter Arao).

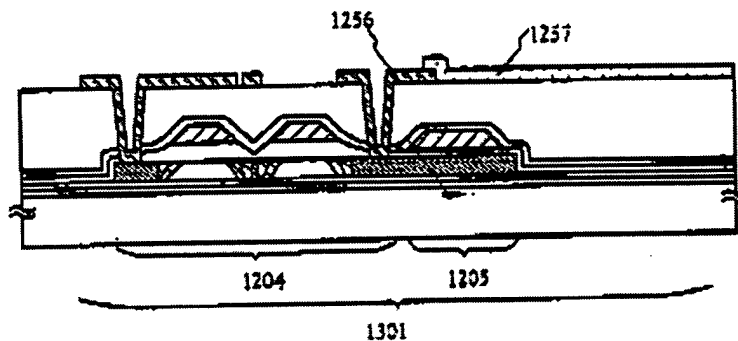


FIG. 22A

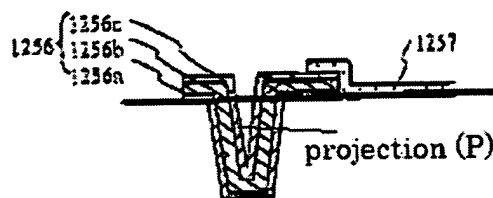


FIG. 22B

Regarding Claim 1, Arao, embodiment 7, FIGS. 22A-22D does disclose a liquid crystal display device comprising:

a thin film transistor (1204, FIG. 22A, col. 27, lines 47-49);

a projection (P, FIG. 22B {as shown above}, note that P included 1256b-c) over a drain electrode (1256a, col. 27, lines 45-50) of the thin film transistor (1204); and a pixel electrode (1257, col. 27, lines 44-46) connected to the film projection (P), wherein the projection has a stacked structure (1256b-c, col. 27, lines 30-40).

Regarding Claim 4, Arao, embodiment 7, FIGS. 22A-22B further teaches the liquid crystal display device according to claim 1, wherein at least one of the drain electrode

(1256a, FIG. 22B), and the projection (P) contains one selected from the group consisting of titanium, and aluminum (col. 27, lines 34-41).

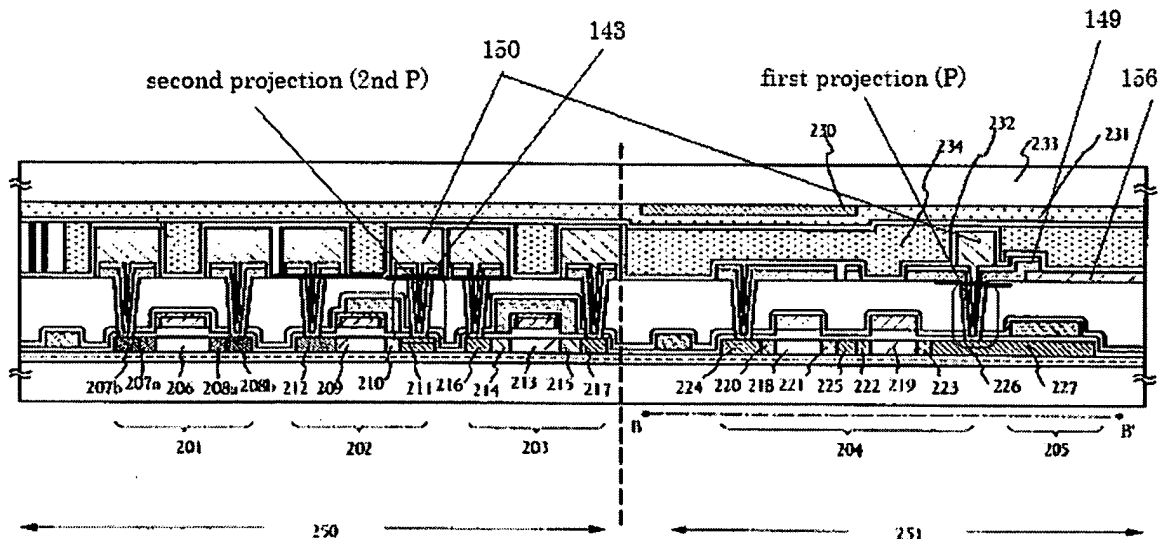


FIG. 11

Regarding Claim 13, Arao, embodiment 1, FIGS. 1-6, & 11 teaches A liquid crystal display device comprising: a pixel portion (251, FIG. 11, col. 12, lines 25-30) including a thin film transistor (204, col. 12, line 26), a first projection (P, FIG. 11, [as shown above], note the P included the two layers: upper top layer 149 and a cutout portion of 150, col. 12, lines 65-67) over a drain electrode (lower bottom layer 149, FIG. 5A, col. 12, lines 10-12) of the thin film transistor (204) and a pixel electrode (156, FIG. 5A, col. 12, line 9) connected to the first projection (P); and a terminal portion (250, col. 12, lines 25-26) including a wiring (lower bottom of wiring 143, col. 12, lines 10-12), a second projection (2<sup>nd</sup> P, note that 2<sup>nd</sup> P included the two layers: upper top of 143 and a cutout portion of 150) over the wiring (lower bottom of 143) and a terminal electrode (upper top of wiring 143) connected to the second

projection (2<sup>nd</sup> P), wherein each of the first projection (P) and the second projection (2<sup>nd</sup> P) has a stacked structure.

Regarding Claim 14, Arao, embodiment 1, FIGS. 1-6, & 11 teaches the liquid crystal display device according to claim 13, wherein a gate electrode (122, FIG. 2C, col. 10, lines 54-57) of the thin film transistor (204) is formed over an area (218, 219, FIG. 11, col. 12, lines 50-52).

In regards to Claims 14-15, the process limitation of how “the area which is pretreated” and “wherein the area is formed using photocatalyst” are formed has no patentable weight in claim drawn to structure. Note that a product by process claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Fessmann, 180 USPQ 324; In re Avery, 186 USPQ 161; In re Wertheim, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); and In re Marosi et al, 218 USPQ 289, all of which make it clear that it is the patentability of the final product per se which must be determined in a product by process claim, and not the patentability of the process, and that an old or obvious product by a new method is not patentable as a product, whether claimed in product by process claims or not. Note that applicant has the burden of proof in such cases, as the above case law makes clear.

Regarding Claim 16, Arao, embodiment 1, FIGS. 1-6, & 11 further teaches the liquid crystal display device according to claim 13, wherein at least one of the gate electrode (119, FIG. 2C, col. 10, lines 20-25), the drain electrode (149), the first projection (P), and the second projection (2<sup>nd</sup> P, col. 11, lines 53-60) contains one selected from the group consisting of gold, silver, copper, platinum, palladium, tungsten, nickel, tantalum, bismuth, lead, indium, tin, zinc, titanium, and aluminum.

Regarding Claim 17, Arao, embodiment 1, FIGS. 1-6, & 11 further teaches the liquid crystal display device according to claim 13, wherein the thin film transistor (204) includes an amorphous semiconductor (103a, col. 7, lines 3-6).

#### **Claim Rejections - 35 USC § 103**

##### **35 U.S.C. 103 Conditions for patentability; non-obvious subject matter.**

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arao, embodiment 7, FIGS. 22A-22D (Patent No.: US 6639265 B2) (hereinafter Arao) in view of Arao, embodiment 6, FIGS. 16-19, & 21.

Regarding Claim 2, Arao, embodiment 7, FIGS. 22A-22D does disclose all the limitation of claim 1.

However, Arao, embodiment 7, FIGS. 22A-22D does not disclose wherein a gate electrode of the thin film transistor is formed over an area.

Nevertheless, Arao, embodiment 6, FIGS. 16-19, & 21 does teach wherein a gate electrode (1224, FIG. 18C, col. 25, lines 40-45) of the thin film transistor (1204) is formed over an area (1108, FIG. 16C, col. 23, lines 29-31).

Therefore, since both Arao, embodiment 7, FIGS. 22A-22D and Arao, embodiment 6, FIGS. 16-19, & 21 teach on the LED process It would have been obvious to one ordinary skill in the art at the time the invention was made to further including wherein a gate electrode of the thin film transistor is formed over an area in Arao, embodiment 7, FIGS. 22A-22D, as taught by Arao, embodiment 6, FIGS. 16-19, & 21. One would have been motivate to make such a change to improve the electrical characteristic and performance of the light emitting device.

In regards to claims 2-3, the process limitation of how "the area which is pretreated" and "wherein the area is formed using photocatalyst" are formed has no patentable weight in claim drawn to structure. Note that a product by process claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Fessmann, 180 USPQ 324; In re Avery, 186 USPQ 161; In re Wertheim, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); and In re Marosi et al, 218 USPQ 289, all of which make it clear that it is the patentability of the final product per se which must be determined in a product by process claim, and not the patentability of the process, and that an old or obvious product by a new method is not patentable as a product, whether claimed in product by process claims or not.



Note that applicant has the burden of proof in such cases, as the above case law makes clear.

Regarding Claim 5, Arao, embodiment 6, FIGS. 16-19, & 21 further disclose the liquid crystal display device according to claim 1, wherein the thin film transistor (1204) includes an amorphous semiconductor (1103a, FIG. 16A, col. 18, lines 16-20).

Claim 6 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arao et al. (Patent No.: US 6639265 B2) (hereinafter Arao).

Regarding Claims 6 and 18, Arao further disclose the liquid crystal display device according to claim 1 and 13 is included in a display screen (active matrix liquid crystal display, col. 9, lines 25-30) except a television receiver. It would have been obvious to one ordinary skill in the art at the time the invention was made to have the liquid crystal display device including in a display screen of a television receiver, wherein the liquid crystal display device is intended use for the television receiver since it has been held to be within the general skill of a worker in the art.

#### Conclusion

"Applicants' amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.”

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Tran whose telephone number is 571 270-1749. The examiner can normally be reached on Monday through Friday: 7:30AM-5:00PM (E.S.T.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Loke can be reached on (571) 272-1657. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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TTRAN

*Andy Hung*

*Andy Hung  
Primary Examiner*